CHAPTER 1

NAVAL AVIATION MAINTENANCE PROGRAM (NAMP)

Chapter Objective: *Upon completion of this chapter, you should have the knowledge to recognize the structure of the Aviation Maintenance Administrationman Rating, identify the three levels of aircraft maintenance, and recognize the organizational structure of the aircraft maintenance department.*

This training manual (TRAMAN) is designed as a self-study text for personnel of the Navy and Naval Reserve who are preparing to meet the professional (technical) qualifications for advancement to petty officer third class and petty officer second class in the Aviation Maintenance Administrationman (AZ) rating. It can also be used as an aid for the AZ3 or AZ2. The minimum professional qualifications for advancement in all ratings are listed in the latest revision of the *Manual of Navy Enlisted Manpower and Personnel Classifications and Occupational Standards,* section 1, NAVPERS 18068.

Since AZs perform administrative, management, and clerical duties required in implementing and supporting the Naval Aviation Maintenance Program (NAMP), it is only natural that the advancement career of the AZ parallel these duties. Clerical duties are usually manual functions. They are repetitious in nature and basic to the rating. Administrative duties require more initiative, experience, and responsibility for their effective performance than clerical duties require. Management duties involve supervision of the administrative and clerical elements of the AZ rating as well as planning, scheduling, and coordinating of the aircraft maintenance workload. Personnel who have demonstrated outstanding management capabilities are often selected for further advancement to warrant or commissioned status in the field of aviation maintenance.

The assignment possibilities of an Aviation Maintenance Administrationman cover a wide range of duties and responsibilities. The specific duties that you might perform depend largely upon the type of organization to which you are assigned. Duty assignments available to the AZ are limited only by the location of operating aircraft and maintenance activities. Assignment possibilities range from the Headquarters, Naval Air Systems Command all the way down to the smallest type of aircraft operating or maintenance activity. Billets for AZs exist on most aircraft carriers, and the AZs assigned aboard a carrier may be attached either to the ship or to one of the embarked squadrons. Regardless of the billet you are assigned, you will be working with aviation maintenance personnel to assist in keeping aircraft flying.

Many interesting overseas shore billets exist for AZs. If married, some third class and all second class petty officers may qualify to bring their dependents to overseas locations at government expense. Shorter duty tours usually prevail at the few overseas stations where dependents are not allowed or where they choose not to go. Between sea tours, the AZ third or second class may be assigned to one of the many naval air stations along the Gulf Coast, East Coast, and West Coast. In addition, the Naval Air Training Command has a few naval stations located inland, and AZs maybe assigned to them.

One of the shore duty billets available to AZs is assignment to the Naval Technical Training Center, NAS, Meridian, Mississippi, as an instructor in the Aviation Maintenance Administrationman school. Another possibility is that of an instructor at one of the Fleet Aviation Specialized Operational Training Group (FASOTRAGRU) training site detachments located in the U.S. and abroad. Instructor duty is normally reserved for highly qualified second and first class petty officers.

Other possible duty assignments include staff duty with one of the major fleet (Atlantic or

Pacific) commands or with one of the several industrial-type naval aviation depots.

Soon after becoming a Navy member, you realize that more leadership is required in the higher rates. Advancement not only involves the acquisition of superior knowledge, it also requires demonstrated ability to handle people. This ability increases in importance as you advance through the petty officer rates.

Responsibilities concerning the most important aspects of naval leadership are outlined in the latest revision of the *United States Navy Regulations.* Naval leadership means the art of accomplishing the Navy's mission through people. It is the sum of those qualities of intellect, of human understanding, and of moral character that enables a person to inspire and manage a group of people successfully. Therefore, effective leadership is based on personal example, good management practices, and moral responsibility. The term *leadership* includes all three of these elements. If this threefold objective is carried out effectively in every command, the program will make better leaders of Navy personnel in their present and future assignments. As an AZ advances up the leadership ladder, his/her worth to the Navy will be judged on the amount of efficient work from subordinates rather than the actual work done by the AZ leader.

For further information on the practical application of leadership and supervision, refer to the latest edition of *Military Requirements for Petty Officer 3,* NAVEDTRA 10044-A, and *Military Requirements for Petty Officer 2,* NAVEDTRA 10045-A.

A large number of the personnel striking for the AZ rating, and almost all lower rated AZs, are assigned to the aircraft maintenance department of a squadron, ship, or shore station. Most of the duties performed by these personnel are productive-type functions in support of other members of the department. Therefore, it is important that each AZ have a working knowledge of the NAMP and the organizational structure of aircraft maintenance departments.

AIRCRAFT MAINTENANCE ORGANIZATION

In most operating units (or activities), the aircraft maintenance department is the largest department. Its primary efforts are to support the unit's mission. The operations department has the responsibility for carrying out the unit's mission of flight operations (other than ferry or test flights) by Navy aircraft. In support of the unit's mission, the objective of the maintenance department is to maintain all assigned aircraft in a state of full mission capability. An aircraft in this category is considered to be in a material condition of readiness to safely perform all of its intended missions.

All aircraft maintenance departments are organized along the same general lines; that is, a standard organization is used throughout the Navy. The advantages of having a standard organization can be seen if you consider what happens when you are transferred between aircraft maintenance activities. When you are transferred to another activity, you know that the work centers in both old and new activities have the same code numbers and names; that the officers occupy similar billets (although names and ranks will be different); and that you will perform clerical functions using the same publications, forms, and procedures. In other words, when you transfer from one aviation maintenance activity to another, you can, in a very short time, perform in your new unit.

MAINTENANCE CONCEPTS, LEVELS, AND TYPES

An important objective of the Naval Aviation Maintenance Program (NAMP) is to achieve and maintain maximum material readiness, safety, and conservation of material. This objective is accomplished through command attention, policy direction, technical direction, management, and administration of all programs affecting activities responsible for aviation maintenance, including associated material and equipment. All aviation activities base their policies, plans, programs, and procedures on the NAMP.

The NAMP is founded upon the three-level maintenance concept, and is the authority governing the management of organizational-, intermediate- and depot-level aviation maintenance. It provides the management tools required for efficient and economical use of personnel and material resources in performing maintenance. It also provides the basis for establishing standard organizations, procedures, and responsibilities for the accomplishment of all maintenance of naval aircraft, associated material, and equipment. The division of maintenance into three levels allows management to classify maintenance functions by levels; assign responsibility for maintenance

functions to a specific level; assign maintenance tasks that are consistent with the complexity, depth, scope, and range of work to be performed; accomplish any maintenance task ensuring optimum use of resources; and collect, analyze, and use data to assist all levels of management concerned with the NAMP.

When a new aircraft model is accepted for naval service, it fills a specific need for a given length of time. Adequate personnel, facilities, and material for maintenance support of these aircraft for this length of time are planned and assigned in accordance with where, how, and when these aircraft will be used. Therefore, it is necessary for all naval aircraft maintenance personnel to have a thorough knowledge of the NAMP rules and regulations.

MAINTENANCE LEVELS

The term *aircraft maintenance* has a very general meaning, ranging from minutes of squadron servicing to months of overhaul in an industrial-type facility. More than the words *maintenance* or *aircraft maintenance* is needed to indicate a specific meaning. The present Navy concept is to divide all aircraft maintenance functions into three distinct levels. The terms used to describe these levels are *organizational maintenance, intermediate maintenance,* and *depot maintenance.*

Organizational Maintenance (Level 1 Maintenance)

Organizational maintenance is work performed by an operating unit on a day-to-day basis in support of its own operations. Maintenance performed at this level includes line operations (such as servicing, preflight inspections, and minor adjustments, in preparation for flight); periodic inspections of aircraft and equipment and the associated tests, repairs, and adjustments that do not require shop facilities; and component removal and installation. Organizational-level work is done in facilities assigned to the operating units. The assigned facilities may be used exclusively by a single large squadron, or they may be shared with one or more small units.

In an operating activity, organizational maintenance is performed by permanently assigned personnel. Organizational maintenance at naval air stations (on aircraft assigned to the station) is a function of the operations maintenance division (OMD). The OMD also provides organizational maintenance and other assistance to transient aircraft, as directed by higher authority.

Intermediate Maintenance (Level 2 Maintenance)

Intermediate maintenance is work performed in centrally located facilities for the support of operating activities within a designated geographical area, at a particular base or station, or aboard aviation ships. This level of maintenance includes shop-type repair and test work on aircraft, components, and equipment from the supported units, including station aircraft. Technical assistance (when required) is furnished by personnel of the intermediate maintenance facility to the supported operating activities. Also, aircraft intermediate maintenance departments (AIMDs) provide facilities and equipment to supported activities for the performance of organizational-level aircraft maintenance.

NOTE: The aircraft intermediate maintenance department is commonly referred to as the SUPPORTING activity, and the organizational maintenance activity (squadron) as the SUPPORTED activity.

Intermediate maintenance activities are manned by permanently assigned personnel and by personnel temporarily assigned from the tenant squadrons. When these squadrons deploy, their intermediate maintenance personnel accompany the squadron, and they are then temporarily assigned to the AIMD on board the ship or at the new station.

Depot Maintenance (Level 3 Maintenance)

Depot maintenance is work that must be done in an industrial-type facility. Such a facility may be either military or civilian. If the work is contracted out to a civilian facility, the type of work is still depot maintenance. This level of maintenance (standard depot-level maintenance or SDLM) includes overhaul and major repair or modification of aircraft, components, and equipments. It also includes the manufacture of specified aeronautical parts to be stocked as spares and the manufacture of kits for authorized aircraft and equipment modification. Installation of these spare parts and the incorporation of the modification kits may be done at this level or at a lower level of maintenance.

Navy depot maintenance activities are manned primarily by civilians, and are known as naval aviation depots (NADEPs). Some military personnel are usually assigned to the NADEPs to help perform the intermediate and organizational maintenance work connected with the depot facility.

By reading this section, you can see that the three aircraft maintenance levels provide an orderly separation of the various maintenance tasks. The task and equipment complexity, the space requirements, the skill levels of assigned personnel, and the scope of support responsibility are the basis for the separation.

MAINTENANCE TYPES

There are two types of aircraft maintenance performed within the Naval Establishment. They are rework and upkeep.

Rework may be performed on any aircraft equipment or support equipment. It is performed by industrial activities assigned the mission, task, or functional responsibility of providing maintenance program support. Rework is performed by military and civilian personnel and managed by Commander, Naval Air Systems Command.

Upkeep is performed on any aircraft equipment or support equipment. It is performed by military activities that are assigned aircraft or equipment, or assigned the mission, task, or functional responsibility of providing direct support to such activities. Upkeep is performed by military/contractor personnel, and is managed by the aircraft controlling custodians.

The Chief of Naval Operations (CNO) sponsors and directs the NAMP. The NAMP is administered through the operational chain of command. Material and technical support are provided by the Naval Supply Systems Command (NAVSUP) and the cognizant systems commands. Some activities may be assigned intermediate maintenance responsibility for an entire logistic area, if requested by the cognizant controlling custodian. Specific activities designated to perform intermediate maintenance are authorized to perform higher level maintenance on systems and equipment unique to the assigned mission. Certain organizational maintenance activities are authorized to perform selective functions in partial intermediate support of their own operations.

Shore Stations

Navy shore activities assigned intermediate-level maintenance responsibilities have an AIMD to perform assigned maintenance. Those shore activities with assigned aircraft have an operations maintenance division (OMD) within the operations department to perform organizational maintenance on assigned aircraft and transient aircraft.

Naval air reserve units (NARUS) are responsible for performing both intermediate and organizational maintenance on their assigned aircraft; however, the supporting activity (station) is responsible for logistic support. Naval air reserve squadrons are responsible for organizational maintenance on their assigned aircraft while on active duty or assigned to a fleet unit. During regularly scheduled drill periods, maintenance is performed according to the training requirements.

Ships

The multi-purpose aircraft carrier (CV), nuclear powered multi-purpose aircraft carrier (CVN), amphibious assault ship - helicopter (LPH), and amphibious assault ship - multi-purpose (LHA) type of ships are responsible for performing organizational and intermediate maintenance on assigned aircraft. They also provide organizational and/or intermediate material, facilities, and support equipment needed by the embarked air wing, squadrons, and units.

Squadrons

Squadrons and units are responsible for performing organizational maintenance on assigned aircraft. While shore based, designated squadron maintenance personnel are temporarily assigned to the AIMD of the supporting station for training and augmentation of the support effort. When afloat, designated squadron maintenance personnel are assigned, as required, to the AIMD of the supporting ship.

Specific squadrons and units, regardless of location, may be required to perform intermediate maintenance functions on systems and equipments unique to their assigned aeronautical equipment and/or mission. Squadrons and units are provided material, facilities, and support equipment by the supporting ship or station; and selected quantities of readily transportable material and support equipment are provided as organizational property.

AIRCRAFT MAINTENANCE DEPARTMENT ORGANIZATION

The aircraft maintenance department supports naval operations by the upkeep of aircraft and associated support equipment to the assigned level of maintenance. This support is accomplished while adhering to the organizational principles and objectives as prescribed in the latest revision of the NAMP (OPNAVINST 4790.2).

Since all maintenance activities have similarities in mission, operation, and administration, it is only reasonable that they be standardized in these areas as much as possible. A standard maintenance department that is properly organized and administered ranks high in the following areas:

1. Performance and training of maintenance personnel
2. Aircraft, equipment, and system readiness
3. Safety
4. Employment of manpower and materials
5. Planning and scheduling of the workload
6. Management control of the organization
7. Evaluation of work performance
8. Combat readiness of the unit
9. Continuity when aircraft and/or personnel are transferred between commands

The objectives of these areas cannot be met by means of a manual or an organization structure alone. They are met by the intelligent efforts of all naval personnel engaged in the maintenance tasks. Specific functions of aircraft maintenance departments include the following:

1. Periodic maintenance and routine inspection and servicing of aircraft, associated support equipment, and aeronautical material and components, including the necessary disassembly, cleaning, examination, repair, modification, test, inspection, assembly, and preservation
2. Special work (when required) to comply with technical directives or local instructions
3. Correction of aircraft and equipment discrepancies
4. Assurance of high quality in all work
5. Maintenance of required records and technical publications
6. Maintenance and custody of tools and other equipment provided the activity for its own use
7. Training of assigned personnel
8. Conducting maintenance and ground handling safety programs
9. Submission of reports for statistical, analytical, and historical purposes

The depth and complexity of specific functions vary with the number and type of aircraft involved and the assigned maintenance level. The aircraft maintenance organizations that are covered in the rest of this chapter are the intermediate and organizational levels. These are the basic levels to which the NAMP is directed. Activities that perform these levels of maintenance are also the activities to which you will most likely be assigned.

ORGANIZATIONAL STRUCTURE

An organizational structure is created by the various responsibilities that are needed before a prescribed mission can be accomplished. These responsibilities are assigned to each segment (division, branch, section, or work center) of the organization. Structure design involves defining the responsibilities growing out of assigned tasks, tracing relationships required among segments of the organization, and designing the means by which instructions are given to begin or stop an action directed by someone in charge.

A line relationship, normally shown in a vertical line on an organization chart, is a relationship that exists between a superior and subordinate within both staff and line segments of the organization. This relationship may be identified as a direct supervisory relationship involving work assignments to subordinates. On the other hand, the staff relationship (normally shown as a horizontal line feeding into the main arteries of the organization) is the relationship that exists between a staff supervisor and a production line supervisor. Staff personnel are concerned with administrative service and support of the production effort.

MANAGEMENT

Management is the exercise of authority and responsibility for the performance of the mission, tasks, and work of the maintenance department. The organizational structure requires that the maintenance officer (with the aid of subordinate officers) manage the maintenance department and be responsible to the commanding officer for the accomplishment of the department's mission. The maintenance officer directs the maintenance department in accordance with directives from higher authority.

Planning, control, and production are functional management responsibilities assigned to the maintenance officer. The maintenance officer and subordinate officers provide the direction and guidance essential for subordinate divisions to implement and comply with all local and higher authority maintenance policies and technical directives. The maintenance officer estimates and programs facilities, equipment, manpower, and training requirements.

In the standard organization, the following subordinate officers assist the maintenance officer in the management of the department:

The assistant maintenance officer supervises the activities of the staff divisions; namely, the quality assurance/analysis division and the maintenance administrative section.

The maintenance/material control officer exercises direct supervision over the production divisions; namely, the aircraft, avionics/armament, and line divisions.

Various aircraft maintenance division and branch officers organize and manage their respective divisions and branches.

The organization for maintenance departments provides firm lines of authority from the maintenance officer to the personnel accomplishing the work for which the department is responsible. The term *department* is used in this training manual (TRAMAN) as a general term that applies to all aircraft maintenance activities having a department head.

All major segments of the department reporting directly to the department head are called divisions. Divisions are subdivided into branches. (In cases of maintenance activities assigned as divisions to other departments, the term *division*, designating the next echelon, is used in place of department. Branches become sections, and sections become units.)

ORGANIZATIONAL LEVEL

Organizational maintenance activities are the main users and operators of naval aircraft. Therefore, most of their maintenance tasks involve the day-to-day support of their own operations. Organizational maintenance activities are composed of maintenance managers, who manage the activity; staff divisions, which perform support-type functions for the production divisions; and maintenance managers and production divisions, which actually perform the various maintenance tasks.

Figure 1-1 is an organizational chart of a typical organizational-level maintenance department. The numbers shown in the various blocks are work center codes. Work center codes are used in the maintenance data system, which is an important part of the NAMP. Work center codes are necessary for recording and reporting work done, since data processing computer methods are used for these purposes. Typical work centers are maintenance control, quality assurance/analysis division, the airframes branch of the aircraft division, and the electronics branch of the aviation/armament division.

Staff Divisions

In an organizational maintenance activity, staff divisions provide services and support for the production divisions. They correlate the accomplishments and progress of the production divisions. Together, the staff divisions give the maintenance officer a consolidated view of the current status of the maintenance picture.

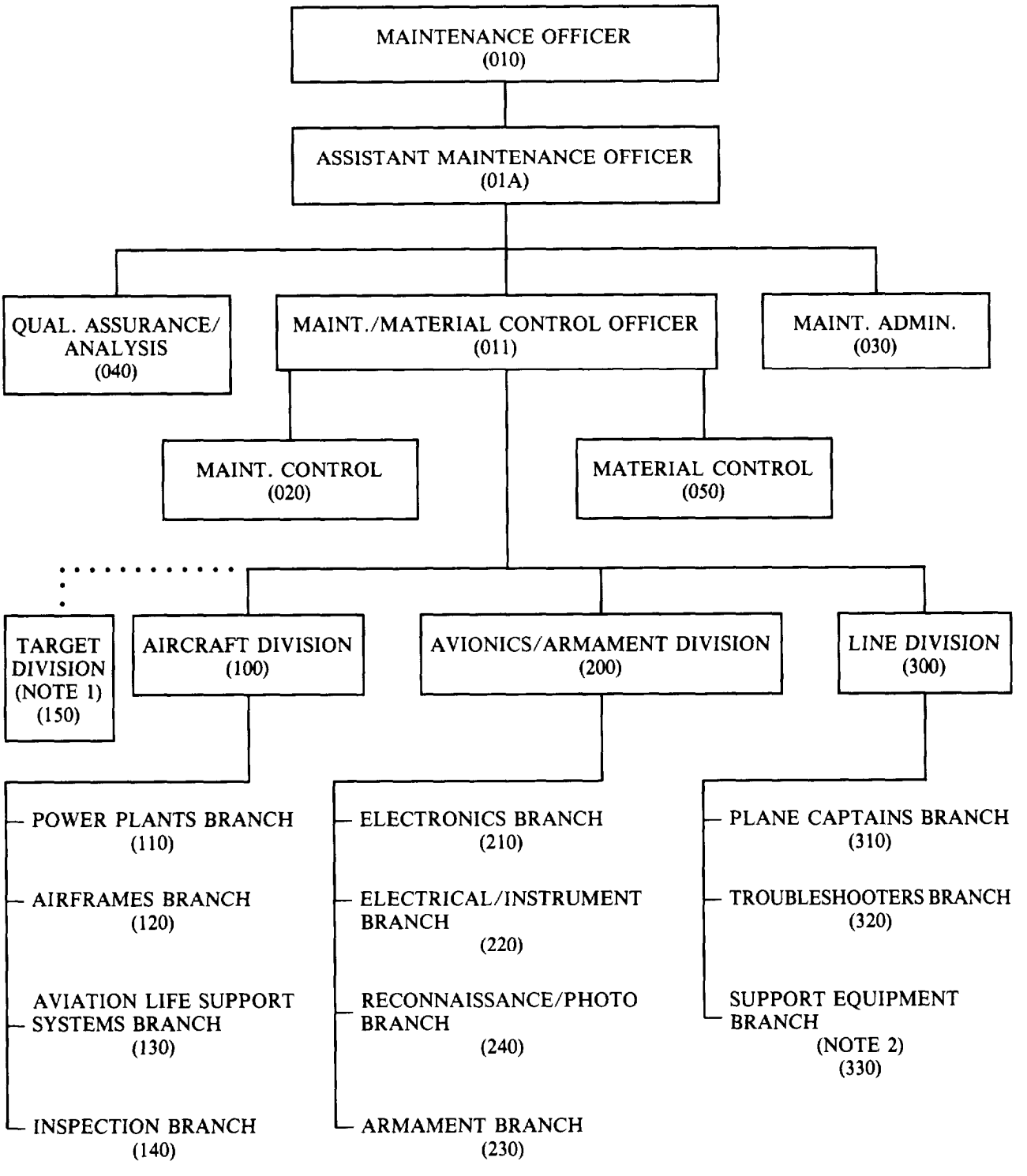
A discussion of some of the more important functions of the staff divisions, especially those to which you, as an AZ, might be assigned, is contained in the following paragraphs. A more detailed discussion of these divisions and their responsibilities is contained in the NAMP.

The staff divisions in organizational maintenance activities are quality assurance/analysis and maintenance administration.

QUALITY ASSURANCE/ANALYSIS DIVISION.— The basic concept of quality assurance is the prevention of the occurrence of defects. This concept includes all events from the start of the maintenance operation to its completion, and it is the responsibility of all personnel. Achievement of quality assurance depends upon prevention, knowledge, and special skills.

Prevention is based upon the principle that it is necessary to preclude maintenance failures. This principle extends to the safety of personnel, the maintenance of equipment, and the entire maintenance effort. Prevention is concerned with the regulation of events, rather than being regulated by them.

Knowledge is derived from factual information. It introduces data collection and analysis as a means of acquiring this knowledge.



NOTES

1. When responsibilities relative to the operation and maintenance of aerial or surface targets are extensive, the CO will establish a target division.
2. When responsibilities relative to operation and maintenance of SE are extensive, the CO will establish an SE branch under the line division.

Figure 1-1.—Navy organizational-level maintenance department organization.

Special skills, not normally possessed by production personnel, are required of a staff trained in the technique of data analysis and supervision of the quality assurance/analysis division program.

The quality assurance program provides a systematic and efficient method for gathering, analyzing, and maintaining information on the quality characteristics of products and on the source and nature of defects and their immediate impact on the current operation. The program permits decisions to be based on facts rather than intuition or memory, Also, the quality assurance program provides comparative data, which will be useful long after a particular event has occurred.

Quality assurance is a staff function that requires both authority and assumption of responsibility for actions. Its objective is to readily pinpoint problem areas in which management can improve the quality, uniformity, and reliability of the total maintenance effort; eliminate unnecessary man-hour and dollar expenditures; improve the training, work habits, and procedures of maintenance personnel; increase the excellence and value of reports and correspondence originated by the activity; effectively disseminate pertinent technical information; establish realistic material and equipment requirements in support of the maintenance effort; and effectively support the safety and quality deficiency reporting program.

The quality assurance/analysis division consists of a relatively small group of highly skilled maintenance personnel. Their working spaces are located near the production divisions and the maintenance control officer. The quality assurance organization is composed of the following three functional areas.

1. Quality management. This function is that of formulating, implementing, and auditing procedures, instructions, and operations to assure compliance with the governing instructions on quality assurance.

2. Quality verification. This function ensures that all materials processed by the maintenance department meet the prescribed quality requirements.

3. Technical publications. This function ensures the technical publications library (TPL) is operated in support of assigned aeronautical equipment according to the maintenance level of responsibility involved.

As an AZ, you will be interested in the primary functions performed by the quality assurance/ analysis division of an organizational maintenance activity. These functions are as follows:

- Review all incoming technical publications and directives to determine their application to quality assurance.

- Prepare or assist in the preparation of maintenance instructions to ensure that proper direction and emphasis are given to implementing the quality assurance plan.

- Maintain the central TPL for the department, including letter-type technical directives. Control classified technical publications for the department. Ensure that each division and/or branch receives all publications applicable to its work area, and that these publications are kept current and complete. (Chapter 3 of this manual contains a detailed discussion of the TPL.)

- Ensure that all work guides, checkoff lists, check sheets, maintenance requirements cards, etc., used to define or control maintenance operations are complete and current before issuing.

- Review all engineering investigation requests, quality deficiency, technical publication deficiency, hazardous material, and explosive mishap reports to ensure they are accurate, clear, concise, and comprehensive before mailing.

- Perform work center and special audits on technical publications.

- Review and note unnecessary and/or recurring discrepancies requiring special action.

- Ensure that the configuration of aircraft and components is such that all essential modifications have been incorporated.

The quality assurance/analysis division provides sound and sufficient analytical information to the maintenance officer to enable a continual review of management practices within the organization. A quality assurance/analysis division is established in each aircraft organization to monitor, control, and apply the maintenance data system (MDS) within that activity. This division serves as a contact point between the

work center and the data services facility, and is responsible for all aspects of the MDS at the activity level.

Quality assurance/analysis functions are regularly assigned to senior personnel of the AZ rating; therefore, this section is primarily composed of AZs. The size of the analysis section varies from one activity to another, depending upon the size of the maintenance activity, number of aircraft maintained, etc. The analysis section normally consists of one senior petty officer who is formally trained in the MDS procedures, data processing capabilities, and the techniques of statistical analysis. Additionally, the analyst must be aggressive in maintaining a high quality of input data and imagination in applying analysis techniques to provide useful data for maintenance management purposes. The analysis section reviews and analyzes reports produced by the MDS for information that is of benefit to the maintenance activity.

The general responsibility of the analysis section is to extract and examine pertinent data from the MDS reports. The results are then presented in chart, tabular, or graphic form for easy viewing. The requirements for analysis may stem from various sources and apply to a wide range of maintenance subjects. In some instances, analysis may be initiated to provide an answer to a specific problem. In other instances, analysis of selected areas of maintenance (for example, personnel utilization or productivity of work centers) may be initiated as a monitoring action.

Some of the more important responsibilities of the analysis section are as follows:

- Collect, screen, and forward all MDS source documents (cards and forms used to collect data) to the data services facility (DSF) for processing. Those activities using the Naval Aviation Logistics Command Management Information System (NALCOMIS) should refer to the *NALCOMIS User's Manual* for specific procedures of processing MDS source data.

- Collect and maintain, in various forms, all data needed to manage the maintenance effort.

- Analyze and compare maintenance performance against maintenance plans and workload estimates.

- Review maintenance data reports for significant variations from normal, and isolate and identify the trouble areas revealed by these reports.

- Assist the maintenance officer and other supervisory personnel in developing new types of data reports deemed necessary for management of the maintenance effort.

- Prepare briefs and explanations covering the content of reports produced by the maintenance data system (DS) for presentation, as required by the commanding officer, maintenance officer, etc.

- Identify and analyze material deficiencies and high man-hour consumption areas, and study other pertinent trends.

- Assist the material control center in relating the contents of monthly data reports to material consumption and forecasts for material.

- Train work center personnel in proper methods of preparing source documents, and assist supervisory personnel in the correct interpretation of resulting reports.

- Coordinate all the activity's data collection matters with the local DSF, including the preparation of additional reports as required.

MAINTENANCE ADMINISTRATION SECTION.— The administrative section provides administrative services for the department by

- preparing maintenance oriented correspondence that requires action or special attention by the maintenance officer or higher authority;

- establishing and controlling a central maintenance reporting and recordkeeping system for all administrative reports and correspondence, including a file to assure submission of recurring reports;

- implementing all directives concerning distribution, retention, and disposition of administrative records and reports;

- providing clerical and administrative services for the department;

- maintaining a master maintenance message board, annotated with appropriate action taken;

- ensuring distribution of sufficient quantities of incoming messages, correspondence, and other data;

- coordinating department administrative and security responsibilities with other departments and divisions as required;

- effecting proper distribution of nontechnical information and publications; and

- maintaining necessary personnel assignment records for the department.

Maintenance/Material Control

The maintenance officer may consider the tasks performed by maintenance/material control to be a staff function. However, the maintenance/material control officer exercises authority in a line position between the maintenance officer and the production divisions.

The maintenance/material control officer is directly responsible to the maintenance officer for the overall productive effort and material support of the department. To separate the functions performed by maintenance/material control, it is divided into two work centers—one for the maintenance control functions and one for the material control functions. These are discussed further in the following paragraphs.

MAINTENANCE CONTROL WORK CENTER.— The space in which the personnel of this work center perform their functions is commonly referred to as maintenance control, or the maintenance control office.

The maintenance control office is the nerve center of the entire maintenance department. As head of this office, the maintenance/material control officer directs the production divisions with the assistance of the maintenance control chief. The maintenance/material control officer exercises control and coordination of the production divisions to ensure prompt movement of aircraft, parts, and materials to promote harmony and cooperation. This officer maintains liaison with the supporting activity to ensure that the department's productive capacity is kept compatible with workload requirements.

In discharging these responsibilities, the personnel assigned to maintenance control perform the following functions:

- Plan and schedule aircraft through all phases of assigned maintenance.

- Initiate maintenance actions to the work centers for scheduled and unscheduled maintenance as required, and assign priorities and completion times.

- Perform progress checks on work assigned.

- Maintain current aircraft status on the visual information display system (VIDS) board and keep cognizant divisions and work centers informed of the status of aircraft and related equipment.

- Prepare necessary aircraft parking plans and movement schedules.

- Maintain aircraft logs according to current directives.

- Ensure that maintenance instructions are prepared when required, and provide the necessary control to ensure compliance by work centers concerned.

- Assign a job control number for each maintenance action.

- Receive completed and processed source documents from the quality assurance/analysis division and file for historical purposes.

- Take necessary actions for reporting aircraft accounting data, aircraft engine accounting data, and other required reports.

In the final analysis, maintenance control personnel plan, schedule, and provide positive control of all maintenance performed on or in support of assigned aircraft. Most of the tasks performed in maintenance control are within the scope of the AZ rating; therefore, for the most part, this work center is composed of AZs.

MATERIAL CONTROL CENTER (MCC).— To maintain an effective aircraft maintenance program, a cooperative working relationship must exist between production and supply. Effective maintenance of complex weapons systems cannot be accomplished without an adequate material supply program. A material control center is provided in the organizational maintenance department to act as liaison between the maintenance department and the local supply activity.

The material control center ensures that proper parts, tools, and equipment are available to the production divisions in the required quantities at the proper times. Personnel in this control center compile and analyze maintenance usage data and furnish technical advice and information to the local supply activity on the identity and quantity of supplies, spare parts, and material necessary to accomplish the assigned workload.

The material control center provides material support to the department by

- passing all requirements for material required for direct support of weapons system maintenance to the ship or station supply support center;
- maintaining a material control register for all material requested in direct support of weapons system maintenance;
- maintaining liaison with the supporting supply department on maintenance material matters to ensure that material needs of the maintenance department are satisfied;
- initiating surveys in the event of loss, damage, or destruction of accountable items of material and equipment;
- recording and reporting custody of materials;
- performing certain cost and allotment record accounting, charting, and budgeting of costs;
- obtaining, controlling, and reporting authorized allowances of material;
- establishing procedures to ensure proper operation of tool rooms and the performance of tool inventories;
- validating the NMCS/PMCS status listing on a daily basis; and
- establishing delivery and pickup points for all material agreed on by the supply and maintenance officer, and ensuring that material received is promptly routed to the applicable work center.

The MCC is also responsible for the maintenance of aircraft inventory records for assigned aircraft. This responsibility includes the inventory of aircraft upon receipt or transfer.

Production Divisions

Maintenance of naval aircraft involves the actual performance of maintenance tasks by mechanics and technicians. The production divisions are manned by maintenance personnel. On an organization chart the production divisions are shown as the lowest element, but this is not in keeping with their importance. If it were not for the production divisions, there would be no reason for the existence of any other part of the organization.

The production element of organizational maintenance activities consists of four divisions, as indicated in figure 1-1. These divisions may be subdivided into branches (as indicated) to perform the required maintenance tasks more efficiently. A discussion of some of the more important functions of the production divisions of an organizational maintenance activity is contained in the following paragraphs.

AIRCRAFT.— The aircraft division coordinates and completes scheduled (inspections) and unscheduled maintenance (major discrepancies that cannot be corrected by troubleshooters) of assigned aircraft. This division performs organizational maintenance tasks in the airframes, power plants, aviators' equipment, and in the inspection branch areas.

AVIONICS/ARMAMENT.— The avionics/armament division performs organizational maintenance tasks in the avionics and armament areas on assigned aircraft. This division provides personnel to the aircraft division, as required, to accomplish scheduled maintenance (inspections) on aircraft.

LINE.— The line division is responsible for maintenance that involves the day-to-day tasks and functions associated with actual flight operations. AIMDs do not have a division that corresponds to the line division, since they do not operate aircraft. Preflight, postflight, turnaround, oil sampling, daily inspections, between-flight servicing and replenishment, the minor adjustment and checkout of installed aircraft equipment, and assuming custody and accountability for tools and support equipment (SE) assigned to the division are examples of functions performed in this division. The line division administers the plane captain assignment and qualification program and coordinates and directs the troubleshooters, who are normally assigned from work

centers in the other production divisions to correct minor discrepancies.

TARGET.— A target division is established when responsibilities relative to the operation and maintenance of aerial or surface targets are extensive. The target division coordinates and completes periodic maintenance, inspections, decontamination, and rehabilitation of assigned targets.

INTERMEDIATE MAINTENANCE

The primary purpose of intermediate maintenance is to support and supplement the work of organizational maintenance activities. These functions are usually performed in centrally located areas for the support of operating aircraft on a shore station, aboard a ship, or within a designated area.

Intermediate maintenance activities are not assigned aircraft for operational purposes; their efforts are concentrated on repairing and testing aircraft components. Naturally, this requires a certain amount of recordkeeping and reporting.

The organizational structure of activities performing intermediate maintenance is, for the most part, closely related to that of an organizational maintenance activity. Because of their size and maintenance functions performed, intermediate maintenance activities are composed of more divisions than organizational maintenance activities. As in organizational maintenance activities, intermediate maintenance activities are composed of maintenance managers, staff divisions, and production divisions. An intermediate maintenance department organization is shown in figure 1-2. A discussion of the various divisions of an intermediate maintenance department is contained in the following paragraphs.

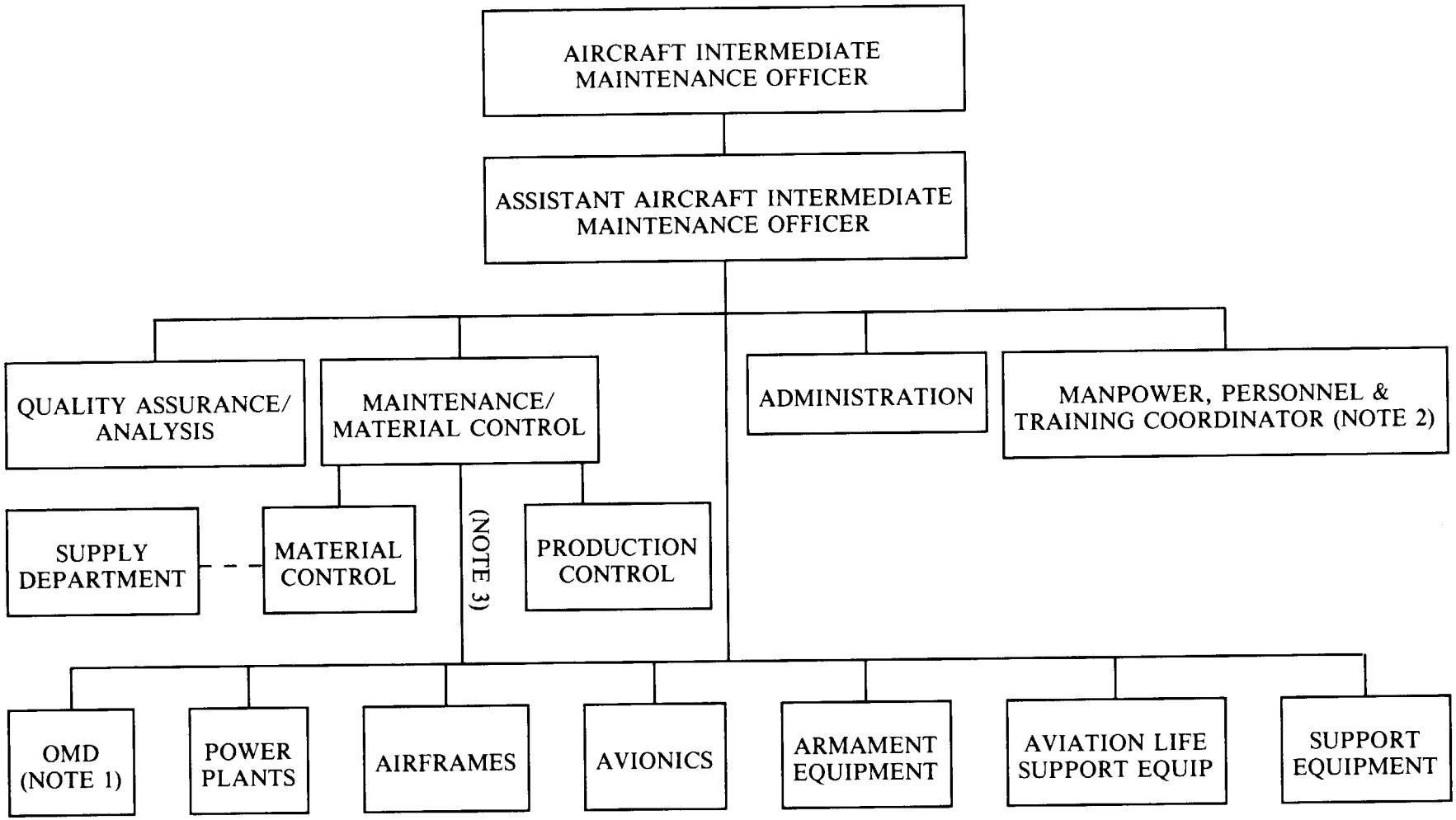
Staff Divisions

Staff divisions are incorporated into intermediate maintenance activities for essentially the same reasons as they are in organizational maintenance activities—to provide services and support to the production elements.

ADMINISTRATION.— The administration division functions basically as the coordinator for all records and reports, directives, correspondence, and personnel matters for the department. It provides the department with such administrative and clerical services as the reproduction, distribution, and routing of messages, directives, correspondence, and other forms of informational data. This division implements directives concerning the distribution, retention, and disposition of records, reports, and logs. It controls the classified matter required by the department, establishes and coordinates the department training requirements, and obtains any school quotas needed to support these requirements. It acts as a liaison between the divisions of the department, between the maintenance department and other departments of the organization, and between the maintenance department of its parent organization and the maintenance department of other organizations.

The administration division accomplishes the following specific functions:

- Establishes and controls a central reporting and recordkeeping system for all maintenance reports and correspondence.
- Implements all directives concerning distribution, retention, and disposition of records, reports, and logs.
- Provides clerical and administrative services for the department.
- Maintains a master message board of current messages, annotated with the action taken as appropriate. Keeps a message history file by date-time group for a minimum of 6 months.
- Establishes and coordinates the department training requirements. Obtains necessary school quotas as required.
- Reproduces, as necessary, and distributes incoming messages and other data.
- Maintains correspondence files in accordance with the Navy Directives System (SECNAVINST 5210.11) by each division or branch.
- Maintains a current organizational roster board, which includes, as a minimum, names, rates, and billet assignments as listed in OPNAV 1000/2, Manpower Authorization.
- Supervises and coordinates department administrative responsibilities with other departments and divisions as required.
- Safeguards and distributes personal mail to department personnel, when appropriate.



NOTE 1: When specific authority has been granted to combine the Operations Maintenance Division (OMD) and IMA, an organizational maintenance division will be established.

NOTE 2: For AIMDs not large enough to rate the E-9 billet associated with this function, and in those cases where full E-9 and E-8 manning is not available, this separate organizational position is not required.

NOTE 3: Direct authority for production matters only.

Figure 1-2.—Intermediate-level maintenance department organization (ashore).

- Conducts liaison with squadron or station administration departments regarding maintenance department personnel matters.

- Makes proper distribution of all nontechnical information and publications.

- Distributes approved locally issued maintenance directives, procedures, reports, and studies.

- Controls classified material required by the department.

- Establishes proper transportation and communication systems to provide complete support of the workload.

- Assigns spaces to the various divisions and establishes the responsibility for security and cleanliness of such spaces.

- Assumes responsibility for the cleanliness and security of vacant or unassigned aircraft maintenance spaces.

- Arranges department participation in joint inspections of facilities assigned to tenant activities, especially incident to the departure of a tenant activity.

QUALITY ASSURANCE/ANALYSIS DIVISION.— The quality assurance/analysis division of intermediate maintenance activities has the same prime functions as previously discussed—to preclude the occurrence of defects. This is accomplished in two ways: (1) through statistical analysis to compare the results obtained with those desired, and (2) through intensive research to find methods of improving effectiveness of the overall maintenance effort.

The major concerns of the quality assurance/analysis division include the following:

- Safety (of both personnel and equipment)

- The need for training of maintenance personnel in the most efficient and effective methods and procedures

- The quality of workmanship and of materials used in maintenance

- The reliability of each equipment and its component parts, and of the procedures used in maintenance of the equipment

- Qualifications of all quality assurance personnel, including the collateral duty inspectors

The functions performed by the analyst in both levels of maintenance are practically the same; therefore, they are not discussed further in this section.

Production Control

As the name implies, production control is the central control point of the entire maintenance effort. This is accomplished primarily by proper planning, scheduling, and assignment of the various maintenance tasks performed within the maintenance department.

Intermediate maintenance activities exist primarily for the purpose of supporting operating activities; therefore, the personnel working in the production control work center are concerned with the procedures involved in planning and scheduling the workload, which consists of repairing, testing, and processing aircraft parts, components, and related equipment. They perform some of the previously discussed functions; however, those concerning the scheduling of aircraft inspections, aircraft logbook maintenance, and aircraft status board maintenance are not required in intermediate production control,

Because of the size of an intermediate activity, the location of the various work centers, and the number of components involved daily, it is not practical to control each component inducted into the activity from a central production control area. Production control delegates some of its functions to certain selected production divisions. Divisions so designated exercise direct control of the production effort of assigned work centers. Such divisions are responsible to maintenance control for the production effort of the assigned work centers, scheduling components into work centers, and assigning priorities as directed by production control.

The segment of these selected divisions concerned with production control functions should not be confused with the production control work center shown in figure 1-2. The production control work center in the figure is the overall coordinator for all division production control segments. The entire responsibility for production of the department is controlled by this work center.

Production control cooperates with the staff members by using their findings and recommendations to improve the overall maintenance

effort. Together with the administration division, the quality assurance/analysis division, the analysis section, and material control, production control provides the maintenance officer with a complete picture of the maintenance situation as it exists at any given time, and makes recommendations for improvement.

Material Control

The functions of the material control work center of intermediate maintenance activities are closely related to those previously discussed under the organizational-level maintenance activities. Since intermediate activities do not have custody of aircraft, their material control work center has no responsibility for aircraft inventory and inventory record maintenance.

The material control work center coordinates and controls the supply functions of the department. It acts as a liaison between the department and the local supply activity, and it processes all supply and material transactions for the other divisions of the department. This work center requisitions material, maintains the material control register, maintains inventories of materials on hand, maintains records of accountable items held by the department, maintains records of all material transactions, and accounts for the expenditure of funds by the department. It furnishes technical advice and information to the local supply activity concerning material requirements for the assigned workload.

The material control work center of intermediate maintenance activities has an aeronautical material screening unit (AMSU). AMSU coordinates the screening of received materials and parts to determine the status and repair responsibility/capability.

Production Divisions

The standard organization framework for intermediate maintenance activities provides for six production divisions. (See note 1 on fig. 1-2.) These production divisions are generally manned by personnel of the same rating, in contrast to organizational maintenance departments where personnel of more than one rating are grouped into fewer divisions. The type of work usually performed by an individual is the same regardless of the maintenance level at which a person is working; that is, ADs work on engines and related equipment, AEs on instruments and electrical equipment, and ATs work on avionics equipment. The difference between work performed in production divisions at various maintenance levels lies in the depth of maintenance performed.

Production divisions provide intermediate maintenance on aircraft components and equipment for the supported activities. Some of the more important responsibilities and functions of these divisions are described in the following paragraphs.

POWER PLANTS.— The power plants division is manned by Aviation Machinist's Mates (ADs) who perform maintenance on power plants, power plant components, and associated systems.

AIRFRAMES. — Aviation Structural Mechanics (AMs) are assigned to work centers in the airframes division. This division is responsible for the specified level of maintenance of the airframe and structural components; movable structures and surfaces including their hydraulic and pneumatic control and actuating systems and mechanisms; air-conditioning, pressurization, visual improvement, oxygen, and other utility systems; and seat and canopy ejection systems and components.

AVIONICS .— The avionics division is manned with the appropriate combination of the following ratings to provide maintenance of avionics equipment for the supported activities.

The Aviation Electrician's Mates (AEs) maintain aircraft electrical and instrument systems.

The Aviation Electronics Technician (AT) performs preventive and corrective maintenance on aviation electronic components supported by conventional and automatic test equipment, including repair of weapon replaceable assemblies (WRA) and shop replaceable assemblies (SRA). The AT also performs microminiature (2M) component repair and performs test equipment qualification and associated test bench preventive and corrective maintenance.

AVIATORS' EQUIPMENT.— Aircrew Survival Equipmentmen (PRs) are assigned to the aviators equipments division. This division is responsible for intermediate maintenance in connection with parachutes, life rafts, life vests, pressure suits, oxygen masks, emergency equipment kits, flight clothing, oxygen regulators, automatic parachute actuators, aviators' protective helmets, etc. Aviation Structural Mechanic E (AME) personnel may also be assigned to this division for upkeep and support of the oxygen

system, pressurization and air-conditioning systems, and other emergency equipment as assigned within the scope of that rating.

ARMAMENT EQUIPMENT.— Aviation Ordnancemen (AOs) are assigned to the armament equipment division, and are responsible for maintenance of aircraft armament equipment and aviation ordnance equipment.

SUPPORT EQUIPMENT (SE).— The Aviation Support Equipment Technician (AS) performs the necessary maintenance on the SE assigned to the maintenance department and supported activities. SE includes, but is not limited to, such items as test stands, workstands, mobile electric power plants, and pneumatic and hydraulic servicing equipment.

SUMMARY

By now, you should realize that the role the AZ plays in the Naval Aviation Maintenance Program is an important one. Regardless of your assignment, at sea or ashore, in a squadron or an AIMD, the basic concept of providing safe, reliable aircraft is our primary objective. To meet this objective, the Navy must rely upon you, the AZ, to provide detailed, exact information in a timely fashion. Learn your references and use them on a daily basis. Your job will become easier, and you will be respected for being a professional by doing it right the first time. Now let's study the rating in more detail.

CHAPTER REVIEW QUESTIONS

Q1. The NAMP is founded upon what maintenance concept?

Q2. What are the levels of maintenance used within the Navy?

Q3. What type of maintenance is performed by an operating unit on a day-to-day basis in support of its own operations?

Q4. What are the two types of maintenance performed within the Naval Establishment?

Q5. Who is responsible to the commanding officer for the accomplishment of the maintenance departments mission?

Q6. What is the basic concept of the quality assurance/analysis division?

Q7. Maintaining current aircraft status on the visual information display system (VIDS) is the responsibility of what work center?

Q8. What is the primary purpose of the intermediate maintenance department?

Q9. What unit within an intermediate maintenance activity is responsible for coordinating the screening of received materials and parts to determine the status and repair responsibility/capability?

Q10. The difference between work performed in production divisions at various maintenance levels depends on what?